

- 1) $x^2 - 0x - 121 = 0$
- 2) $x^2 - 7x + 0 = 0$
- 3) $x^2 - 21x + 108 = 0$
- 4) $x^2 - 10x - 21 = 0$
- 5) $x^2 - 8x + 12 = 0$
- 6) $x^2 - 2x - 5 = 0$
- 7) $24x^2 - 51x - 6 = 0$
- 8) $40x^2 - 23x - 13 = 0$
- 9) $75x^2 - 63x + 12 = 0$
- 10) $49x^2 - 7x + 2 = 0$

$$ac = -121 \quad b = 0$$

$$mn = \rightarrow \quad m+n \rightarrow$$

$$-11, 11$$

$$\begin{array}{r} x^2 - 11x \quad | \quad + 11x - 121 \\ x(x-11) \quad | \quad + 11(x-11) \end{array}$$

$$(x-11)(x+11) = 0$$

$$x = 11, -11$$

- 1) $x^2 - 0x - 121 = 0$
- 2) $x^2 - 7x + 0 = 0$
- 3) $x^2 - 21x + 108 = 0$
- 4) $x^2 - 10x - 21 = 0$
- 5) $x^2 - 8x + 12 = 0$
- 6) $x^2 - 2x - 5 = 0$
- 7) $24x^2 - 51x - 6 = 0$
- 8) $40x^2 - 23x - 13 = 0$
- 9) $75x^2 - 63x + 12 = 0$
- 10) $49x^2 - 7x + 2 = 0$

$$x^2 + 7x = 0$$

$$x(x+7) = 0$$

$$x = 0, -7$$

c is missing

- 1.) $x^2 - 6x - 121 = 0$
- 2.) $x^2 - 7x + 12 = 0$
- 3.) $x^2 - 21x + 108 = 0$
- 4.) $x^2 - 10x - 24 = 0$
- 5.) $x^2 - 8x + 12 = 0$
- 6.) $3x^2 - 2x - 5 = 0$
- 7.) $24x^2 - 51x - 6 = 0$
- 8.) $40x^2 - 23x - 13 = 0$
- 9.) $75x^2 - 63x + 12 = 0$
- 10.) $49x^2 - 7x + 2 = 0$

$$a=1$$

$$x^2 - 21x + 108 = 0$$

$$ac = 108$$

$$b = -21$$

$$-9, -12$$

$$x^2 - 9x - 12x + 108$$

$$x(x-9) - 12(x-9)$$

$$(x-9)(x-12) = 0$$

$$x = 9, 12$$

- 1.) $x^2 - 6x - 121 = 0$
- 2.) $x^2 - 7x + 12 = 0$
- 3.) $x^2 - 21x + 108 = 0$
- 4.) $x^2 - 10x - 24 = 0$
- 5.) $x^2 - 8x + 12 = 0$
- 6.) $3x^2 - 2x - 5 = 0$
- 7.) $24x^2 - 51x - 6 = 0$
- 8.) $40x^2 - 23x - 13 = 0$
- 9.) $75x^2 - 63x + 12 = 0$
- 10.) $49x^2 - 7x + 2 = 0$

$$x^2 - 10x - 24 = 0$$

$$ac = -24$$

$$b = -10$$

$$-12, 2$$

$$-12 + 2 = -10$$

$$(x-12)(x+2) = 0$$

$$x = 12, -2$$

- 1.) $x^2 - 6x - 121 = 0$
- 2.) $x^2 - 7x + 12 = 0$
- 3.) $x^2 - 41x + 108 = 0$
- 4.) $x^2 - 10x - 24 = 0$
- 5.) $x^2 - 8x + 12 = 0$
- 6.) $3x^2 - 2x - 5 = 0$
- 7.) $24x^2 - 51x - 6 = 0$
- 8.) $40x^2 - 23x - 13 = 0$
- 9.) $75x^2 - 63x + 12 = 0$
- 10.) $49x^2 - 7x + 2 = 0$

$$x^2 + 8x + 12 = 0$$

$$a = 12 \quad b = 8$$

$$6, 2$$

$$(x + 6)(x + 2) = 0$$

$$x = -6, -2$$

- 1.) $x^2 - 6x - 121 = 0$
- 2.) $x^2 - 7x + 12 = 0$
- 3.) $x^2 - 41x + 108 = 0$
- 4.) $x^2 - 10x - 24 = 0$
- 5.) $x^2 - 8x + 12 = 0$
- 6.) $3x^2 - 2x - 5 = 0$
- 7.) $24x^2 - 51x - 6 = 0$
- 8.) $40x^2 - 23x - 13 = 0$
- 9.) $75x^2 - 63x + 12 = 0$
- 10.) $49x^2 - 7x + 2 = 0$

$$3x^2 - 2x - 5 = 0$$

$$a = -15 \quad b = -2$$

$$-5, 3$$

$$3x^2 - 5x \quad + 3x - 5 = 0$$

$$x(3x - 5) + 1(3x - 5) = 0$$

$$(3x - 5)(x + 1) = 0$$

$$x = 5/3 \text{ or } -1$$

- 1.) $x^2 - 6x - 121 = 0$
- 2.) $x^2 - 7x + 12 = 0$
- 3.) $x^2 - 21x + 108 = 0$
- 4.) $x^2 - 10x - 21 = 0$
- 5.) $x^2 - 8x + 12 = 0$
- 6.) $3x^2 - 2x - 5 = 0$
- 7.) $24x^2 - 51x - 6 = 0$
- 8.) $40x^2 - 23x - 15 = 0$
- 9.) $75x^2 - 63x + 12 = 0$
- 10.) $49x^2 - 7x + 2 = 0$

$$\begin{aligned}
 -24x - \frac{3}{3} &= 0 \\
 -24x &= \frac{3}{-24} \\
 x &= -\frac{1}{8}
 \end{aligned}$$

$$-24x^2 - 51x - 6 = 0$$

$$ac = 144 \quad b = -51$$

$$-48, -3 \quad \checkmark$$

$$-24x^2 - 48x - 3x - 6 = 0$$

$$-24x(x+2) - 3(x+2) = 0$$

$$(x+2)(-24x-3) = 0$$

$$x = -2, -\frac{1}{8}$$

- 1.) $x^2 - 6x - 121 = 0$
- 2.) $x^2 - 7x + 12 = 0$
- 3.) $x^2 - 21x + 108 = 0$
- 4.) $x^2 - 10x - 21 = 0$
- 5.) $x^2 - 8x + 12 = 0$
- 6.) $3x^2 - 2x - 5 = 0$
- 7.) $24x^2 - 51x - 6 = 0$
- 8.) $40x^2 - 23x - 15 = 0$
- 9.) $75x^2 - 63x + 12 = 0$
- 10.) $49x^2 - 7x + 2 = 0$

$$8x + 3 = 0$$

$$8x = -\frac{3}{8}$$

$$x = -\frac{3}{8}$$

$$5x - 5 = 0$$

$$5x = \frac{5}{5}$$

$$x = 1$$

m	n
60	-10
-60	10
-20	30
20	-30
15	-40

$$40x^2 - 25x - 15 = 0$$

$$a = 40 \quad b = -25 \quad c = -15$$

$$ac = -600 \quad b = -25$$

-600	50
-600	-50
-600	10
-600	-10
-600	-25

$$40x^2 + 15x - 40x - 15 = 0$$

$$5x(8x+3) - 5(8x+3) = 0$$

$$(8x+3)(5x-5) = 0$$

$$x = -\frac{3}{8}, 1$$

- 1.) $x^2 - 6x - 121 = 0$
- 2.) $x^2 - 7x + 12 = 0$
- 3.) $x^2 - 21x + 108 = 0$
- 4.) $x^2 - 10x - 21 = 0$
- 5.) $x^2 - 8x + 12 = 0$
- 6.) $3x^2 - 2x - 5 = 0$
- 7.) $24x^2 - 51x - 6 = 0$
- 8.) $40x^2 - 23x - 13 = 0$
- 9.) $75x^2 - 63x + 12 = 0$
- 10.) $49x^2 - 7x + 2 = 0$

$$5x - 7 = 0$$

$$\begin{array}{r} +7 \quad +7 \\ \hline 5x = 7 \\ \hline x = \frac{7}{5} \end{array}$$

$$5x - 6 = 0$$

$$\begin{array}{r} +6 \quad +6 \\ \hline 5x = 6 \\ \hline x = \frac{6}{5} \end{array}$$

$$25x^2 - 65x + 42 = 0$$

$$\begin{array}{ll} a_c & b \\ mn & mn \end{array} = 1050 \quad -65$$

$$-25, -42 \quad -67$$

$$-30, -35 \quad -65$$

$$25x^2 - 30x - 35x + 42 = 0$$

$$5x(5x-6) - 7(5x-6) = 0$$

$$(5x-7)(5x-6) = 0$$

$$x = \frac{7}{5}, \frac{6}{5}$$

- 1.) $x^2 - 6x - 121 = 0$
- 2.) $x^2 - 7x + 12 = 0$
- 3.) $x^2 - 21x + 108 = 0$
- 4.) $x^2 - 10x - 21 = 0$
- 5.) $x^2 - 8x + 12 = 0$
- 6.) $3x^2 - 2x - 5 = 0$
- 7.) $24x^2 - 51x - 6 = 0$
- 8.) $40x^2 - 23x - 13 = 0$
- 9.) $75x^2 - 63x + 12 = 0$
- 10.) $49x^2 - 7x + 2 = 0$

$$7x - 1 = 0$$

$$\begin{array}{r} +1 \quad +2 \\ \hline 7x = 1 \\ \hline x = \frac{1}{7} \end{array}$$

$$x = \frac{1}{7}$$

$$-7x - 2 = 0$$

$$\begin{array}{r} +2 \quad +2 \\ \hline -7x = 2 \\ \hline x = -\frac{2}{7} \end{array}$$

$$-49x^2 - 7x + 2 = 0$$

$$a = -49 \quad b = -7 \quad c = 2$$

$$\begin{array}{ll} a_c & b \\ mn & mn \end{array} = -98 \quad -7$$

$$-49, 2 \quad -47$$

$$7, -14 \quad -7$$

$$-49x^2 + 7x - 14x + 2 = 0$$

$$-7x(7x-1) - 2(7x-1) = 0$$

$$(7x-1)(-7x-2) = 0$$

$$x = \frac{1}{7}, -\frac{2}{7}$$

$$x = -\frac{2}{7}$$